



Design de Websites Responsivos

Bootstrap

Bootstrap

Bootstrap

- Biblioteca de componentes front-end mais popular do mundo
- Websites responsivos (smartphones, tablets ou PCs)
- Conjunto de ferramentas de código aberto para desenvolvimento com HTML, CSS e JS

<https://getbootstrap.com/>



Bootstrap: Instalação

- **BootstrapCDN (Content Delivery Network)**
 - CSS, JavaScript e imagens do **Bootstrap** são carregados dos servidores e são utilizadas por mais 7.9 milhões de websites

```
<!-- Bootstrap CSS -->  
<link rel="stylesheet"  
href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/  
bootstrap.min.css" integrity="sha384-  
gg0yR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQU0hcWr7x9JvoRxT2M  
Zw1T" crossorigin="anonymous">
```

- **Download do Bootstrap para a pasta do projeto**
-

Bootstrap: Template Inicial* (I)

```
<!doctype html>
<html lang="en">
<head>
<!-- Required meta tags -->
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-
to-fit=no">

<!--Bootstrap CSS >
  <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.
3.1/css/bootstrap.min.css" integrity="sha384-
gg0yR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQU0hcWr7x9JvoRxT2MZw1T" crossorigin
="anonymous">

<title>Hello, world!</title>

</head>

...
```

[*https://getbootstrap.com/docs/4.3/getting-started/introduction/](https://getbootstrap.com/docs/4.3/getting-started/introduction/)

Bootstrap: Template Inicial* (II)

```
...  
<body>  
<h1>Hello, world!</h1>  
...  
  
<!-- Optional JavaScript -->  
<!--jQuery first, then Popper.js, then Bootstrap JS>  
<script src="https://code.jquery.com/jquery-  
3.3.1.slim.min.js" integrity="sha384-  
q8i/X+965Dz00rT7abK41JStQIAqVgRVzpbzo5smXKp4YfRvH+8abtTE1Pi6jizo" crossorigin  
="anonymous"></script>  
  
<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.  
min.js" integrity="sha384-  
U02eT0CpHqdSJJQ6hJty5KVphtPhzWj9W01clHTMGa3JDZwrnQq4sF86dIHNDz0W1" crossorigin  
="anonymous"></script>  
  
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.  
min.js" integrity="sha384-  
JjSmVgyd0p3pXB1rRibZUAYoIIy60rQ6VrjIEaFf/nJGzIxFDs4x0xIM+B07jRM" crossorigin  
="anonymous"></script>  
</body>  
</html>
```

[*https://getbootstrap.com/docs/4.3/getting-started/introduction/](https://getbootstrap.com/docs/4.3/getting-started/introduction/)

Bootstrap: Hello World

```
...  
<title>Hello, world!</title>  
<style>  
  .example {  
    color: white;  
    background: blue;  
    text-transform: uppercase;  
    text-align: center;  
  }  
</style>  
</head>  
  
<body>  
<h1 class="example">Hello, world!</h1>  
  
<h1 class="bg-primary text-white text-center text-  
uppercase">Hello, world Bootstrap!  
</h1>  
...
```

HELLO, WORLD!

HELLO, WORLD BOOTSTRAP!

Bootstrap: Cores (1)

```
...  
<h1 class="text-center">Colors</h1>  
<h3>Text Colors</h3>  
  
<p class="text-primary">bootstrap colors</p>  
<p class="text-success">bootstrap colors</p>  
<p class="text-info">bootstrap colors</p>  
<p class="text-warning">bootstrap colors</p>  
<p class="text-danger">bootstrap colors</p>  
<p class="text-secondary">bootstrap colors</p>  
<p class="text-dark">bootstrap colors</p>  
<p class="bg-danger text-white">bootstrap colors</p>  
<p class="bg-danger text-light">bootstrap colors</p>  
<p class="text-muted">bootstrap colors</p>  
...
```

Text Colors

bootstrap colors

bootstrap colors

bootstrap colors

bootstrap colors

bootstrap colors

bootstrap colors

bootstrap colors

bootstrap colors

bootstrap colors

bootstrap colors

Bootstrap: Cores (2)

...

`<h3>Background Colors</h3>`

`<p class="bg-primary">background colors</p>`

`<p class="bg-success">background colors</p>`

`<p class="bg-info">background colors</p>`

`<p class="bg-info">background colors</p>`

`<p class="bg-warning">background colors</p>`

`<p class="bg-danger">background colors</p>`

`<p class="bg-secondary">background colors</p>`

`<p class="bg-dark">background colors</p>`

`<p class="bg-light">background colors</p>`

`<p class="bg-transparent">background colors</p>`

...

Background Colors

background colors

background colors

background colors

background colors

background colors

background colors

background colors

background colors

background colors

background colors

Bootstrap: Tipografia (1)

...

```
<h3>default font-size 16px</h3>
```

```
<h3>default line-height 1.5</h3>
```

```
<p>1rem (all p elements have margin-top 0 and margin-bottom 16px)</p>
```

```
<h1>hello i'm 40px</h1>
```

```
<h2>hello i'm 32px</h2>
```

```
<h3>hello i'm 28px</h3>
```

```
<h4>hello i'm 24px</h4>
```

```
<h5>hello i'm 20px</h5>
```

```
<h6>hello i'm 16px</h6>
```

```
<p class="h3">hello i'm 40px</p>
```

default font-s

default line-h

all p elements have ma

margin-bottom 1rem (

hello i'm 4

hello i'm 32

hello i'm 28px

hello i'm 24px

hello i'm 20px

hello i'm 16px

hello i'm 40px

Bootstrap: Tipografia (2)

...

```
<h1>normal text <small>small text</small></h1>
```

```
<h6>normal text <small>small text</small></h6>
```

```
<p>I can highlight with <mark>marked text</mark> </p>
```

```
<p>I can highlight with <code>marked text</code> </p>
```

```
<p>I can highlight with <kbd>marked text</kbd> </p>
```

normal text small text

normal text small text

I can highlight with **marked text**

I can highlight with **marked text**

I can highlight with **marked text**

Bootstrap: Tipografia (3)

```
...  
<h1 class="display-1">display 1</h1>  
<p class="display-1">i'm also display 1</p>  
<h1 class="display-2">display 2</h1>  
<h1 class="display-3">display 3</h1>  
<h1 class="display-4">display 4</h1>
```

display

i'm also

display

display

display 3

display 4

Bootstrap: Tipografia (4)

```
<p class="font-weight-bold">Lorem ipsum dolor </p>  
<p class="font-weight-light">Lorem ipsum dolor</p>  
<p class="font-italic">Lorem ipsum dolor</p>  
<p class="lead">Lorem ipsum dolor</p>  
<p class="text-center">Lorem ipsum dolor</p>  
<p class="text-right">Lorem ipsum dolor</p>  
<p class="text-left">Lorem ipsum dolor</p>  
<p class="text-uppercase">Lorem ipsum dolor</p>  
<p class="text-capitalize">Lorem ipsum dolor</p>  
<p class="text-lowercase">KKKKKKKK</p>
```

Lorem ipsum dolor

Lorem ipsum dolor

Lorem ipsum dolor

Lorem ipsum dolor

Lorem ipsum

Lorem ipsum dolor

LOREM IPSUM DOLOR

Lorem Ipsum Dolor

kkkkkkkk

Bootstrap: Google Fonts

```
<link href="https://fonts.googleapis.com/css?family=Indie+Flower&display=swap" rel="stylesheet">
```

```
...
```

```
<style>
```

```
body {
```

```
font-family: 'Indie Flower', cursive;
```

```
}
```

```
</style>
```

```
...
```

Google Fonts

CATALOG

FEATURED

ARTICLES

ABOUT

We want to hear from you! Google Fonts & Icons are doing user studies. [Sign up now](#)



Search fonts

Sentence ▾

Type something

40px ▾



Categories ▾

Language ▾

Font Properties ▾

Viewing 959 of 959 font families

Sort by: Trending now ▾

Roboto

Christian Robertson (12 styles)



Turret Road

Dale Sattler (6 styles)



All their equipment and instruments are olive

A red flare silhouetted the jagged edge of a wing

Bootstrap: *Containers*

```
<!-- container acts as wrapper -->  
<!-- container -->  
<!-- container-fluid -->  
<div class="container bg-danger">i'm simple container</div>  
<div class="container-fluid bg-primary">i'm simple container-fluid  
</div>
```

```
<section id="skills" class="bg-warning">  
<div class="container bg-danger">i'm simple container</div>  
</section>
```

```
<section id="about" class="bg-primary">  
<div class="container-fluid bg-danger">i'm simple container fluid  
</div>  
</section>
```

	i'm simple container	
	i'm simple container-fluid	
	i'm simple container	
	i'm simple container fluid	

Bootstrap: Colunas

```
<div class="container">  
  <div class="row">  
    <div class="col bg-danger">i'm single column</div>  
  </div>  
</div>
```

```
<div class="container-fluid">  
  <div class="row">  
    <div class="col bg-info">i'm single column</div>  
    <div class="col bg-warning">i'm single column</div>  
  </div>  
</div>
```

```
<div class="container">  
  <div class="row">  
    <div class="col bg-white">i'm single column</div>  
    <div class="col bg-secondary">i'm single column</div>  
    <div class="col bg-primary">i'm single column</div>  
  </div>  
</div>
```

Bootstrap: Colunas - *Responsive Breakpoints*

```
<div class="container">
  <div class="row">
    <div class="col-sm-6 col-md-3 col-lg-6 col-xl-3 bg-white">
      i'm single column
    </div>

    <div class="col-sm-6 col-md-3 col-lg-6 col-xl-3 bg-secondary">
      i'm single column
    </div>

    <div class="col-sm-6 col-md-3 col-lg-6 col-xl-3 bg-primary">
      i'm single column
    </div>

    <div class="col-sm-6 col-md-3 col-lg-6 col-xl-3 bg-warning">
      i'm single column
    </div>
  </div>
</div>
```

Website Responsivo: Bootstrap, Font Awesome, Google Fonts

Font Awesome
icon

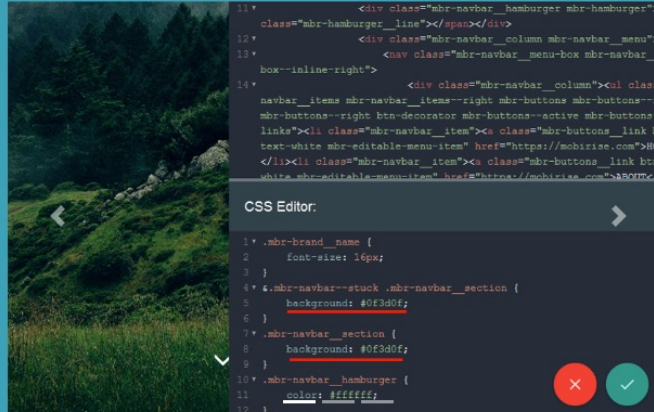
 HTML5

Home Unordered Ordered Colors Images Table

<nav>
elements

First Carousel

Slideshow of HTML5 images with Bootstrap Carousel



<header>
element

CSS3
rounded
borders

<section>
element

- > Text;
- > Images;
- > Sounds;
- > Videos;
- > Animations;
- > 3D content.

Unordered list Tag

The language is made up of a set of codes and symbols that will generate on the browser.

Footer

<footer>
element

Website Responsivo: Bootstrap Template Inicial* (I)

```
<!doctype html>
<html lang="en">
<head>
<!-- Required meta tags -->
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-
to-fit=no">

<!--Bootstrap CSS >
  <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.
3.1/css/bootstrap.min.css" integrity="sha384-
gg0yR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x9JvoRxT2MZw1T" crossorigin
="anonymous">

<title>Hello, world!</title>

</head>

...
```

*<https://getbootstrap.com/docs/4.3/getting-started/introduction/>

Website Responsivo: Bootstrap Template Inicial* (II)

```
...  
<body>  
<h1>Hello, world!</h1>  
...  
  
<!-- Optional JavaScript -->  
<!--jQuery first, then Popper.js, then Bootstrap JS>  
<script src="https://code.jquery.com/jquery-  
3.3.1.slim.min.js" integrity="sha384-  
q8i/X+965Dz00rT7abK41JStQIAqVgRVzpbzo5smXKp4YfRvH+8abtTE1Pi6jizo" crossorigin  
="anonymous"></script>  
  
<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.  
min.js" integrity="sha384-  
U02eT0CpHqdSjQ6hJty5KVphtPhzWj9W01clHTMGa3JDZwrnQq4sF86dIHNDz0W1" crossorigin  
="anonymous"></script>  
  
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.  
min.js" integrity="sha384-  
JjSmVgyd0p3pXB1rRibZUAYoIIy60rQ6VrjIEaFf/nJGzIxFDs4f4x0xIM+B07jRM" crossorigin  
="anonymous"></script>  
</body>  
</html>
```

[*https://getbootstrap.com/docs/4.3/getting-started/introduction/](https://getbootstrap.com/docs/4.3/getting-started/introduction/)

Website Responsivo: Google Fonts

```
// head tag
<link
href="https://fonts.googleapis.com/css?family=Gloria+Hallelujah&dis
play=swap" rel="stylesheet">

// main css
body { font-family: 'Gloria Hallelujah', cursive;}
```

The screenshot displays the Google Fonts website. At the top, the 'Google Fonts' logo is on the left, and navigation links for 'CATALOG', 'FEATURED', 'ARTICLES', and 'ABOUT' are on the right. Below the header is a promotional banner that reads 'We want to hear from you! Google Fonts & Icons are doing user studies.' with a 'Sign up now' link and a close button. The main interface includes a search bar with a magnifying glass icon and the text 'Search fonts'. To the right of the search bar are dropdown menus for 'Sentence' and 'Type something', followed by a size selector set to '40px' with a slider. Further right are icons for font styles (serif, sans-serif, script, etc.) and a refresh button. Below the search bar are three filter buttons: 'Categories', 'Language', and 'Font Properties'. A status line indicates 'Viewing 959 of 959 font families'. On the right side of this line is a 'Sort by: Trending now' dropdown. The font preview section shows two columns. The left column features the 'Roboto' font by 'Christian Robertson (12 styles)', with a red plus icon to its right. Below the font name is a preview of the text 'All their equipment and instruments are alive.' in a clean, sans-serif font. The right column features the 'Turret Road' font by 'Dale Sattler (6 styles)', also with a red plus icon. Below the font name is a preview of the text 'A red flare silhouetted the jagged edge of a wing.' in a cursive, script font.

Google Fonts

CATALOG FEATURED ARTICLES ABOUT

We want to hear from you! Google Fonts & Icons are doing user studies. [Sign up now](#)

Search fonts

Sentence ▼ Type something

40px ▼

Categories ▼ Language ▼ Font Properties ▼

Viewing 959 of 959 font families

Sort by: Trending now ▼

Roboto +
Christian Robertson (12 styles)

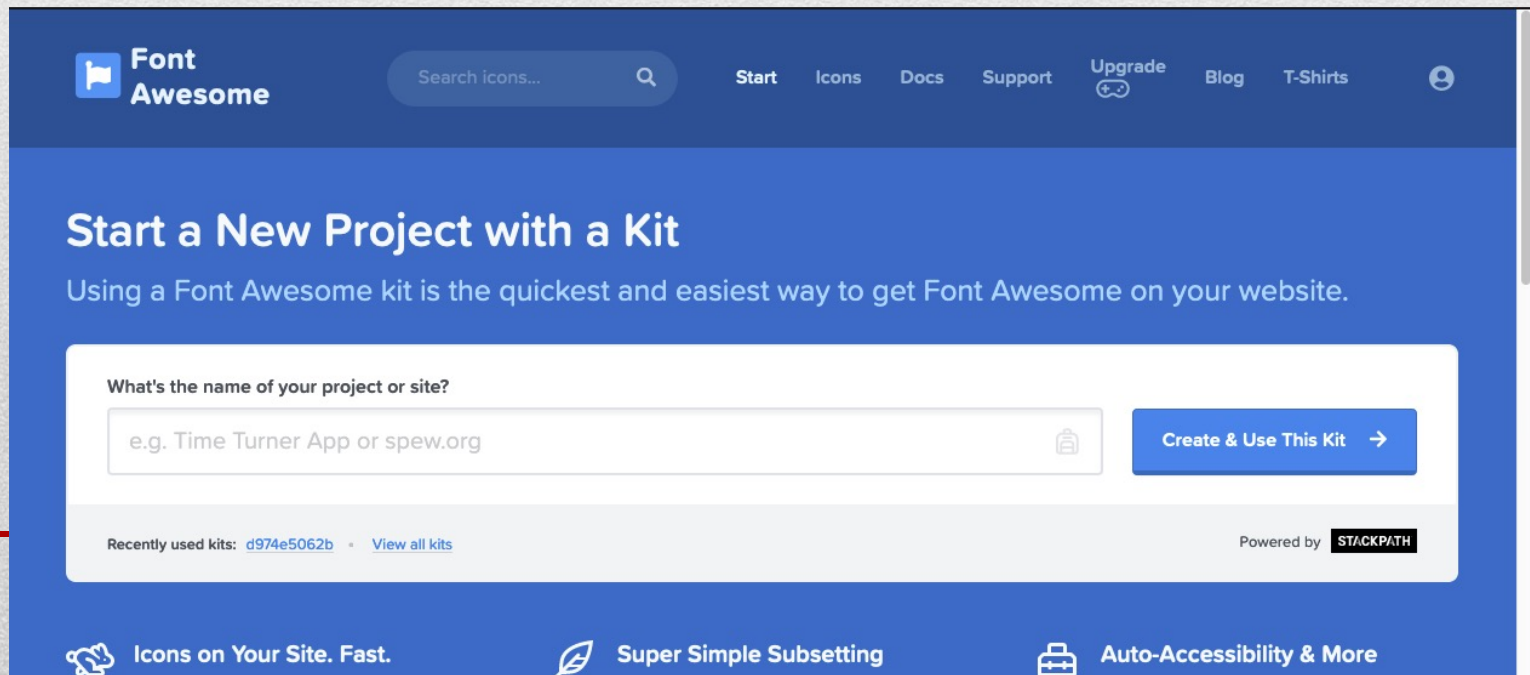
All their equipment and instruments are alive.

Turret Road +
Dale Sattler (6 styles)

A red flare silhouetted the jagged edge of a wing.

Website Responsivo: Font Awesome (1)

- <https://fontawesome.com/>
 - Clicar em "Start for free"
 - Começar um projeto com um kit
 - Copiar o link para o <head> do ficheiro .html






Website Responsivo: Font Awesome (2)

```
// head tag  
<script src="https://kit.fontawesome.com/d974e5062b.js"  
crossorigin="anonymous"></script>
```

The screenshot shows the Font Awesome Kit configuration interface. At the top, there's a header with a back arrow, 'Your Kits', the kit name 'd974e5062b', and links for 'How to Use' and 'Settings'. Below the header, the kit code is displayed: `<script src="https://kit.fontawesome.com/d974e5062b.js" crossorigin="anonymous"></script>`, with a 'Copy Kit Code' button. The main content area is divided into two sections. On the left, the 'Kit Name' field contains 'd974e5062b'. Below it, the 'Icons' section shows 'Free' selected with a radio button, and 'Pro' is unselected. A light blue box below the 'Icons' section contains a person icon and the text: 'Want to go faster? Choose Pro icons and automatically load only what your site uses!'. On the right, the 'About This Kit' section lists features: 'Fast Performance' with a speedometer icon, '1,544 Free Icons' with a green checkmark, '7,345 Pro Icons' with a grey X icon, and 'Brand Icons' with a green checkmark.

← Your Kits


 d974e5062b

 How to Use  Settings





`<script src="https://kit.fontawesome.com/d974e5062b.js" crossorigin="anonymous"></script>` [Copy Kit Code](#)

Kit Name

Icons ☒ Free ☐ Pro

 Want to go faster?
Choose Pro icons and automatically load only what your site uses!

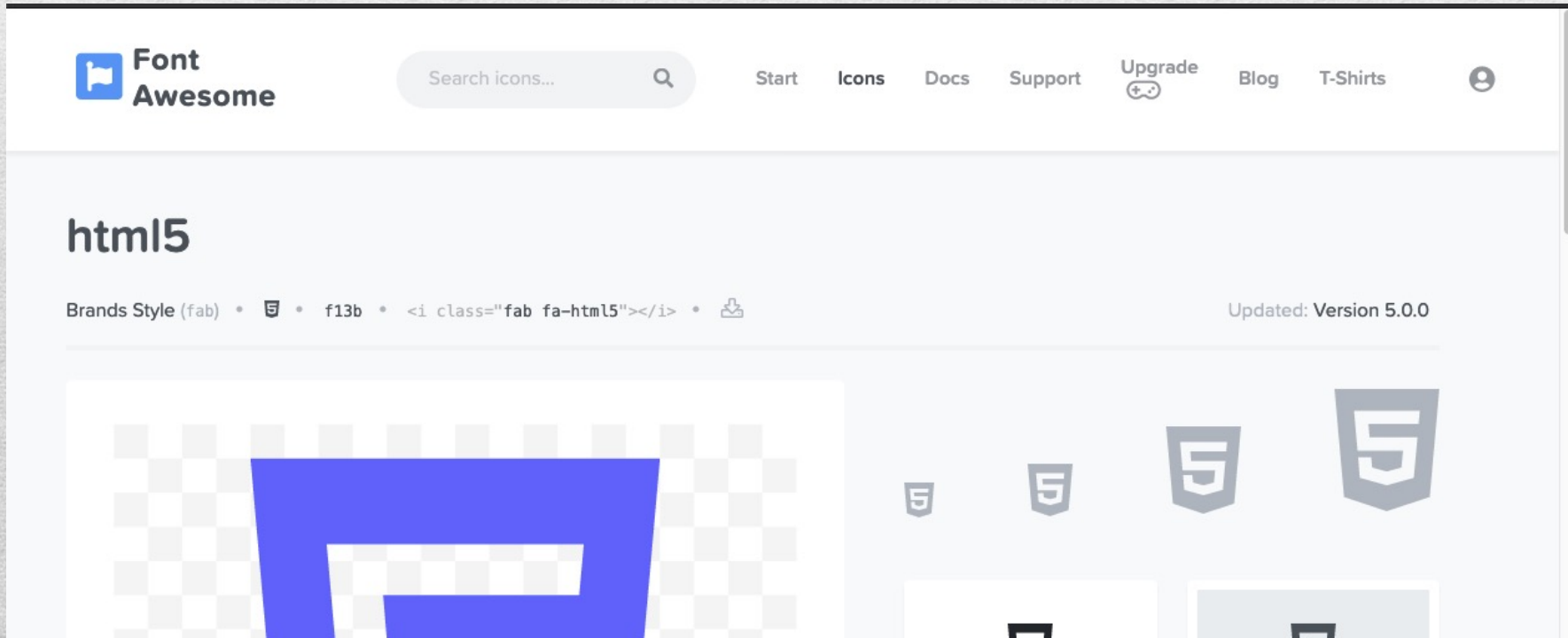
About This Kit

-  Fast Performance
-  1,544 Free Icons
-  7,345 Pro Icons
-  Brand Icons

Website Responsivo: Font Awesome (3)

```
// head tag
<script src="https://kit.fontawesome.com/d974e5062b.js"
crossorigin="anonymous"></script>

// body tag
<i class="fab fa-html5"></i>
```

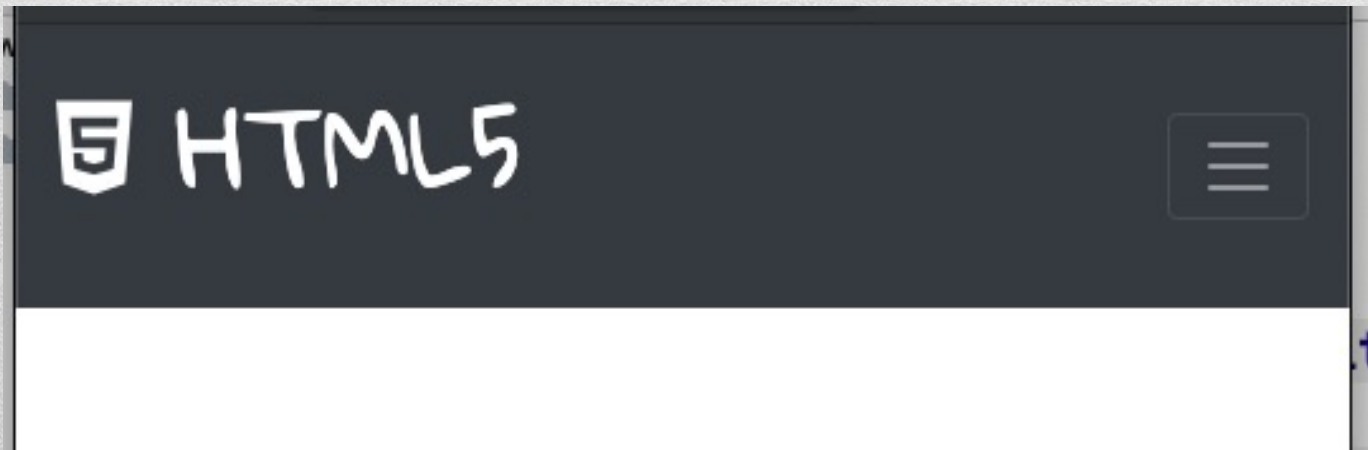


Website Responsivo: <head>

```
<!-- Required meta tags -->
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1,
shrink-to-fit=no">
<!-- Bootstrap CSS -->
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootst
rap.min.css" integrity="sha384-
gg0yR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQU0hcWr7x9JvoRxT2MZw1T"
crossorigin="anonymous">
<!-- Google fonts CSS -->
<link
href="https://fonts.googleapis.com/css?family=Gloria+Hallelujah&dis
play=swap" rel="stylesheet">
<!-- Font Awesome CSS -->
<script src="https://kit.fontawesome.com/d974e5062b.js"
crossorigin="anonymous"></script>
<!-- My CSS -->
<link rel="stylesheet" href="main.css">
```

Website Responsivo: <nav> (1)

```
<nav class="navbar py-3 navbar-dark navbar-expand-sm bg-dark">
<!-- logo -->
<a href="#" class="navbar-brand h1">
  <h1><i class="fab fa-html5"></i> HTML5</h1>
</a>
<button class="navbar-toggler" type="button" data-toggle="collapse"
data-target="#navbarLinks">
<span class="navbar-toggler-icon text-primary"></span>
</button>
...
```



Website Responsivo: <nav> (2)

```
<div class="collapse navbar-collapse" id="navbarLinks">
  <ul class="navbar-nav">
    <li class="nav-item">
      <a href="#home" class="nav-link">Home</a> </li>
    <li class="nav-item">
      <a href="#unordered" class="nav-link">Unordered</a> </li>
    <li class="nav-item">
      <a href="#ordered" class="nav-link">Ordered</a> </li>
    <li class="nav-item">
      <a href="#color" class="nav-link">Colors</a> </li>
    <li class="nav-item">
      <a href="#image" class="nav-link">Images</a> </li>
    <li class="nav-item">
      <a href="#table" class="nav-link">Table</a> </li>
  </ul>
</div>
</nav>
```

Website Responsivo: Unordered <section> (1)

```
<section id="unordered" class="bg-info border-bottom border-white rounded">
  <div class="container-fluid">
    <div class="row height">
      <!-- Title and Unordered list -->
      <div class="col text-center">
        <h2 class="text-warning mb-0"> Unordered list Tag </h2>
        <p class="text-white">The language is made up of a set of
codes and symbols that will generate on the browser:</p>
...

```

Unordered list Tag

The language is made up of a set of codes and symbols that will generate on the browser.

- > Text;
- > Images;
- > Sounds

Website Responsivo: Unordered <section> (2)

```
<ul class="list-group list-group-flush bg-transparent text-white text-left">
```

```
  <li class="list-group-item my-list-elem">  
    <i class="fa fa-angle-right text-white"></i> Text;</li>
```

```
  <li class="list-group-item my-list-elem">  
    <i class="fa fa-angle-right text-white"></i> Images;</li>
```

```
  <li class="list-group-item my-list-elem">  
    <i class="fa fa-angle-right text-white"></i> Sounds;</li>
```

```
  ...  
</ul>
```

Unordered list Tag

The language is made up of a set of codes and symbols that will generate on the browser.

> Text;

> Images;

> Sounds

Website Responsivo: Unordered and Ordered CSS

```
.my-list-elem {  
    background: transparent !important;  
    border: none !important;  
    margin-left: 60px;  
}  
  
.list-group-ordered {  
    list-style: decimal inside !important;  
}  
  
.list-group-item-ordered {  
    display: list-item !important;  
}
```

Ordered list Tag

The main steps that should be done before starting to implement a website are:

1. Start listing the main elements (content) to put in of your a website;
2. Organize the elements in pages putting together related elements;
3. Create the struture diagram (hyperlinks between pages) of the website;

Website Responsivo: Color <section> (1)

```
<section id="color" class="bg-info border-bottom border-white rounded">

  <div class="container-fluid">
    <div class="row d-flex">
      <!-- color img col -->
      <div class="col-md-6 color-picture height order-1 order-md-0"></div>

      <!-- color text col -->
      <div class="col-md-6 order-0 order-md-1">
        ...
      </div>
    </div>
  </div>
```

33FF00	33FF33	33FF66	33FF99
660000	660033	660066	660099
663300	663333	663366	663399
666600	666633	666666	666699
669900	669933	669966	669999

Color

The image shows color codes. Below, Bootstrap colors are illustrated:

☒ Primary

Website Responsivo: Color <section> (2)

```
<!-- title -->
<div class="row">
  <div class="col text-center">
    <h1 class="text-warning mb-0">Color </h1>
    <p class="text-white">The image shows color codes. Below, Bootstrap
    colors are illustrated: </p>
  </div>
</div>
<!-- end of title -->
<!-- single item -->
<div class="d-flex mt-0 ml-5">
  <i class="fas fa-check p-2 bg-primary mr-3 align-self-center"></i>
  <p class="text-white pt-3">Primary</p></div>
<!-- end of single item -->
...
```

33FF00	33FF33	33FF66	33FF99
660000	660033	660066	660099
663300	663333	663366	663399
666600	666633	666666	666699
669900	669933	669966	669999

Color

The image shows color codes. Below, Bootstrap colors are illustrated:

☒ Primary

Website Responsivo: Color <section> CSS

```
.height {  
  min-height: 50vh;  
}
```

```
.color-picture {  
  background:  
url(http://www.theodora.com/gif4/html\_colors.gif)center/cover no-  
repeat fixed;  
}
```

33FF00	33FF33	33FF66	33FF99
660000	660033	660066	660099
663300	663333	663366	663399
666600	666633	666666	666699
669900	669933	669966	669999
66CC00	66CC33	66CC66	66CC99
990000	990033	990066	990099
993300	993333	993366	993399
996600	996633	996666	996699
999900	999933	999966	999999

Color

The image shows color codes. Below, Bootstrap colors are illustrated:

- ☒ Primary
- ☒ Secondary

Website Responsivo: Images <section>

```
<div class="row py-3">
  <div class="col-sm-6 col-md-4 my-3">
      </div>

  <div class="col-sm-6 col-md-4 my-3">
      </div>

  <div class="col-sm-6 col-md-4 my-3 mx-auto">
      </div>  </div>
```

Images Fluid Images

